

REMARKS

In the final Office Action, the Examiner objects to claim 1 as allegedly being incomplete for omitting essential structural cooperative relationships of elements; rejects claims 1, 4-21, 23-16, and 34 under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,950,876 to Bright et al. (hereinafter “BRIGHT”), in view of U.S. Patent No. 7,197,125 to Prasad et al. (hereinafter “PRASAD”); rejects claims 2, 3, and 22 under 35 U.S.C. § 103(a) as allegedly being unpatentable over BRIGHT and PRASAD as applied to claim 1, and further in view of U.S. Patent No. 7,237,025 to Albert et al. (hereinafter “ALBERT”); rejects claims 27 and 29-33 under 35 U.S.C. § 103(a) as allegedly being unpatentable over PRASAD in view of U.S. Patent Application Publication No. US 2003/0137991 to Doshi et al. (hereinafter “DOSHI”); and rejects claim 28 under 35 U.S.C. § 103(a) as allegedly being unpatentable over PRASAD and DOSHI as applied to claim 27, and further in view of ALBERT. Applicants respectfully traverse these rejections.¹

By way of this Amendment, Applicants propose amending claims 1, 4, 5, 13, 19-21, 27, and 34 to improve form. Support for the amendments to the claims can be found, for example, in paragraph [0033], lines 2-4; paragraph [0043], lines 3-5 and paragraph [0045] lines 4-5; paragraph [0034], lines 1-4; and Fig. 5, item 503. No new matter would be added by the present amendment. Claims 1-34 would remain pending upon entry of the present amendment.

¹ As Applicants' remarks with respect to the Examiner's rejections are sufficient to overcome these rejections, Applicants' silence as to assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, motivation to combine references, assertions as to dependent claims, etc.) is not a concession by Applicants that such assertions are accurate or such requirements have been met, and Applicants reserve the right to analyze and dispute such assertions/requirements in the future.

Claim 1 stands objected to as allegedly being incomplete for omitting essential structural cooperative relationships of elements. Applicants respectfully traverse this objection.

The Examiner alleged that there is no structural link linking the agents and the at least one resolver and that since this is a system claim, all components have to be linked or coupled with one another (final Office Action, p. 6). Without acquiescing in the Examiner's rejection, Applicants have amended claim 1 to address the Examiner's concerns and in order to expedite prosecution. Claim 1 now recites that the at least one resolver is configured to contact the agents to obtain the collected information.

Accordingly, Applicants respectfully request that the objection to claim 1 be reconsidered and withdrawn.

Claims 1, 4-21, 23-16, and 34 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over BRIGHT in view of PRASAD. Applicants respectfully traverse this rejection.

Independent claim 1, amended as proposed, is directed to one or more devices in a network that includes agents configured to collect information relating to other devices in the network and at least one resolver configured to contact the agents to obtain the collected information and configured to identify, based on identification information of a subscriber, a network resource that manages elements associated with the subscriber to implement network services for the subscriber, the resolver performing the identification of the network resource in accordance with a resolution process determined based on the information collected by the agents, the resolution process specifying a mapping from the identification information of the subscriber to the network resource. BRIGHT and

PRASAD, whether taken alone or in any reasonable combination, do not disclose or suggest this combination of features.

For example, BRIGHT and PRASAD do not disclose or suggest at least one resolver configured to identify, based on identification information of a subscriber, a network resource that manages elements associated with the subscriber to implement network services for the subscriber, the resolver performing the identification of the network resource in accordance with a resolution process determined based on the information collected by the agents, the resolution process specifying a mapping from the identification information of the subscriber to the network resource, as recited in amended claim 1.

The Examiner admits that BRIGHT does not disclose this feature (final Office Action, p. 7). The Examiner relies on the abstract, lines 10-15 of PRASAD; the authentication server of Fig. 1; as well as Fig. 4A, the alleged path from item 4-005 to item 4-011, of PRASAD for allegedly disclosing this feature (final Office Action, pp. 7-8). Applicants submit that these sections, or any other section, of PRASAD do not disclose or suggest the above feature of amended claim 1.

Lines 6-15 of the abstract of PRASAD disclose:

The directory-enabled service selection framework receives a request to identify one or more services to which a subscriber is subscribed, based on a prior request to modify the subscription of the subscriber to the telecommunications service. A list is generated of the one or more services to which the subscriber is currently subscribed, based on group membership of the subscriber, one or more roles occupied by the subscriber, and authorization information associated with the subscriber that is stored in the directory repository.

This section of PRASAD discloses that a request by a subscriber to modify a subscription leads to the generation of a list of services to which the subscriber is currently subscribed, based on such factors as the group membership of the subscriber, one or more roles

occupied by the subscriber, and authorization information associated with a subscriber. This section of PRASAD does not disclose or suggest, for example, a resolution process specifying a mapping from the identification information of the subscriber to a network resource. Therefore, this section of PRASAD cannot disclose or suggest at least one resolver configured to identify, based on identification information of a subscriber, a network resource that manages elements associated with the subscriber to implement network services for the subscriber, the resolver performing the identification of the network resource in accordance with a resolution process determined based on the information collected by the agents, the resolution process specifying a mapping from the identification information of the subscriber to the network resource, as recited in amended claim 1.

Fig. 1 of PRASAD depicts authentication server 106, which is a RADIUS (Remote Authentication Dial In User Service) server that is primarily used for user authentication (see col. 6, lines 26-27 of PRASAD). This section of PRASAD does not disclose or suggest a resolution process specifying a mapping from the identification information of the subscriber to the network resource. Therefore, this section of PRASAD cannot disclose or suggest at least one resolver configured to identify, based on identification information of a subscriber, a network resource that manage elements associated with the subscriber to implement network services for the subscriber, the resolver performing the identification of the network resource in accordance with a resolution process determined based on the information collected by the agents, the resolution process specifying a mapping from the identification information of the subscriber to the network resource, as recited in amended claim 1.

Fig. 4A of PRASAD depicts a flow diagram of the method of PRASAD. Item 4-005 depicts the step of performing an authorization check based on information in a privilege token and responding with results. Item 4-0011 depicts the step of engaging a service for a user and responding to a service logon request. Items 4-006 to 4-010 depict the steps between these two steps. The Examiner alleges that the line illustrating the flow of the steps in the flow diagram of Fig. 4A of PRASAD corresponds to a path of a resolution process from identification of a subscriber to a network resource (final Office Action, p. 8 and p. 3). Applicants submit that this line connecting the steps in Fig. 4A of PRASAD can in no way be interpreted as a mapping. According to accepted definitions, a mapping creates a correspondence between members of a first set and members of a second set. The line in Fig. 4A simply shows a sequence of steps. Furthermore, Fig. 4A does not even depict a path from identification information of a subscriber to a network resource as would be required by claim 1 based on the Examiner's interpretation of PRASAD. Rather, Fig. 4A depicts a line connecting a step of performing an authorization check to a step of engaging a service for a user. Therefore, this section of PRASAD does not disclose or suggest at least one resolver configured to identify, based on identification information of a subscriber, a network resource that manage elements associated with the subscriber to implement network services for the subscriber, the resolver performing the identification of the network resource in accordance with a resolution process determined based on the information collected by the agents, the resolution process specifying a mapping from the identification information of the subscriber to the network resource, as recited in amended claim 1.

In the Response to Arguments section of the final Office Action, the Examiner alleges that the claimed resolution process is a process comprising steps, which the Examiner equates with the path from the identification information of the subscriber to the network resource (final Office Action, p. 3). While it is true that a resolution process comprises steps, the steps taken by the resolution process are not equivalent to a mapping specified by the resolution process. PRASAD does not disclose or suggest specifying a mapping of any kind, let alone mapping from the identification information of a subscriber (such as an IP address) to a network resource (such as a SAE managing a router).

Furthermore, the Examiner relies on a combination of BRIGHT and PRASAD for allegedly disclosing the features of amended claim 1. For example, the Examiner relies on protocol gateways 211-221 of BRIGHT as allegedly corresponding to the agents recited in claim 1 (final Office Action, p. 7), and the Examiner relies on authentication server 106 of Fig. 1 of PRASAD for allegedly corresponding to the resolver as recited in claim 1.

The protocol gateways of Fig. 2 of BRIGHT interpret network requests and generate queries to a database that provides a common source of data for supported different networks, such as an AAA or a SIP network (see abstract of BRIGHT). Thus, the protocol gateways act as a translating mechanism allowing networks using a different protocol form using the same database, and appear to serve roughly the same function as the service selection gateway 104 in Fig. 1 of PRASAD. Authentication server 106 receives service selection gateway requests and calls the appropriate service selection system routines (col. 6, lines 58-60 of PRASAD).

Combining the protocol gateways of BRIGHT with the authentication server of PRASAD would not result in the combination of features recited in claim 1. For example, authentication server 106 of PRASAD would not perform the identification of services to which a user is subscribed in accordance with a resolution process determined based on information collected by the service selection gateways 211-221 of BRIGHT, as would be required by claim 1 based on the Examiner's interpretation of BRIGHT and PRASAD. In such a hypothetical combination, the determination of which services (such as videoconferencing, streaming video, personalized Internet, business-grade Internet, shopping, and gaming) a user is subscribed to would be completely unrelated to the type of protocol (such as SIP or AAA) used to access the authentication server.

In contrast, amended claim 1 clearly recites a resolver configured to identify, based on identification information of a subscriber, a network resource that manages elements associated with the subscriber to implement network services for the subscriber, the resolver performing the identification of the network resource in accordance with a resolution process determined based on the information collected by the agents, the resolution process specifying a mapping from the identification information of the subscriber to the network resource.

For at least the foregoing reasons, Applicants submit that claim 1 is patentable over BRIGHT and PRASAD, whether taken alone or in any reasonable combination. Accordingly, Applicants respectfully request that the rejection of claim 1 under 35 U.S.C. § 103(a) based on BRIGHT and PRASAD be reconsidered and withdrawn.

Claims 4-12 depend from claim 1. Therefore, these claims are patentable over BRIGHT and PRASAD for at least the reasons set forth above with respect to claim 1.

Accordingly, Applicants respectfully request that the rejection of claims 4-12 under 35 U.S.C. § 103(a) based on BRIGHT and PRASAD be reconsidered and withdrawn.

Moreover, these claims are patentable over BRIGHT and PRASAD for reasons of their own. For example, claim 5 recites that the resolution process generates a resolution graph defined by vertices and edges, where the vertices represent network data types used by the resolvers and at least one of the vertices represents the network resource, and the edges represent resolvers that can perform a mapping from the data type represented by a source vertex to a data type represented by a destination vertex. The Examiner relies on Fig. 4A of PRASAD and col. 12, line 21 to col. 13, line 36 of PRASAD, as well as col. 10, lines 45-57 of PRASAD for allegedly disclosing this feature (final Office Action, p. 12). Applicants disagree with the Examiner's interpretation of PRASAD.

Col. 12, line 21 to col. 13, line 36 of PRASAD, which describe Fig. 4A of PRASAD, disclose a process of service logon. The steps in the process include selecting a service, receiving a service request, providing a privilege token, verifying an authorization system, generating an error message if the user is not authorized to access the service, receiving a service logon, requesting service information, responding with the service information, responding to the read service request, and engaging the selected service. This section of PRASAD does not disclose or suggest a resolution graph.

Therefore, this section of PRASAD cannot disclose or suggest that a resolution process generates a resolution graph defined by vertices and edges, where the vertices represent network data types used by resolvers and at least one of the vertices represents the network resource, and the edges represent resolvers that can perform a mapping from the

data type represented by a source vertex to a data type represented by a destination vertex, as recited in claim 5.

Col. 10, lines 45-57 of PRASAD disclose a login process that is carried out when a user connects over a PPP connection. The service selection gateway constructs a RADIUS ACCESS REQUEST message and sends it to the authentication server. The authentication server returns either an ACCESS ACCEPT or ACCESS REJECT message. This section of PRASAD does not disclose or suggest a resolution graph. Therefore, this section of PRASAD cannot disclose or suggest that a resolution process generates a resolution graph defined by vertices and edges, where the vertices represent network data types used by resolvers and at least one of the vertices represents the network resource, and the edges represent resolvers that can perform a mapping from the data type represented by a source vertex to a data type represented by a destination vertex, as recited in claim 5.

In the Response to Arguments section of the final Office Action, the Examiner alleges that the user identification and the services that the user is qualified for correspond to vertices of a graph and the authentication process corresponds to a resolver and hence an edge of a graph (final Office Action, p. 4). While it may be true that the authentication process of PRASAD may be represented in a graph, PRASAD does not disclose or even remotely suggest generating a graph. If this rejection is maintained, Applicants respectfully request that the Examiner indicate which section of PRASAD discloses or at least suggests generating a graph.

For at least these additional reasons, Applicants submit that claim 5 is not patentable over BRIGHT and PRASAD, whether taken alone or in any reasonable combination.

Independent claim 13 recites features similar to, yet possibly of different scope than, features recited above with respect to claim 1. Therefore, Applicants submit that claim 13 is patentable over BRIGHT and PRASAD for at least reasons similar to the reasons set forth above with respect to claim 1. Accordingly, Applicants respectfully request that the rejection of claim 13 under 35 U.S.C. § 103(a) based on BRIGHT and PRASAD be reconsidered and withdrawn.

Claims 14-19 depend from claim 13. Therefore, these claims are patentable over BRIGHT and PRASAD for at least the reasons set forth above with respect to claim 13. Accordingly, Applicants respectfully request that the rejection of claims 14-19 under 35 U.S.C. § 103(a) based on BRIGHT and PRASAD be reconsidered and withdrawn.

Amended independent claim 20 is directed to a system that includes a gateway configured to receive network service requests from or on behalf of subscribers in a network, at least some of the service requests requiring configuration of one or more routers to satisfy the service request, a network information collector (NIC) configured to identify a service activation engine associated with the one or more routers required to satisfy the service request, the NIC including a plurality of agents configured to collect information relating to a state of a plurality of routers, the collected information being used to identify the service activation engine. BRIGHT and PRASAD, whether taken alone or in any reasonable combination, do not disclose or suggest this combination of features.

For example, BRIGHT and PRASAD, do not disclose or suggest a network information collector (NIC) configured to identify a service activation engine associated with the one or more routers required to satisfy the service request, the NIC including a plurality of agents configured to collect information relating to a state of a plurality of routers, the collected information being used to identify the service activation engine, as recited in amended claim 20.

The Examiner relies on Fig.1 and col. 11, lines 31-35 of PRASAD for allegedly disclosing this feature (final Office Action, p. 10). Applicants disagree with the Examiner's interpretation of PRASAD.

Col. 11, lines 31-35 of PRASAD, which describe item 112 of Fig. 1, disclose:

10. The directory-enabled service selection system responds with the user and service information. Directory-enabled service selection system uses group membership, role occupancy and authorization information to generate this list.

This section of PRASAD discloses that the directory-enabled service selections system looks up user information in a directory. This section of PRASAD does not disclose or suggest the use of network elements required to satisfy a service request. Furthermore, this section of PRASAD does not disclose or even remotely suggest routers or service activation engines associated with routers. Therefore, this section of PRASAD cannot disclose or suggest a network information collector (NIC) configured to identify a service activation engine associated with the one or more routers required to satisfy the service request, the NIC including a plurality of agents configured to collect information relating to a state of a plurality of routers, the collected information being used to identify the service activation engine, as recited in amended claim 20.

In the Response to Arguments section of the final Office Action, the Examiner alleges that the list of services based on user identification corresponds to one or more network elements (final Office Action, p. 4). Applicants submit that the list of services based on user identification cannot reasonably be held to be equivalent to routers or service activation engines associated with routers.

For at least the foregoing reasons, Applicants submit that claim 20 is patentable over BRIGHT and PRASAD, whether taken alone or in any reasonable combination. Accordingly, Applicants respectfully request that the rejection of claim 20 under 35 U.S.C. § 103(a) based on BRIGHT and PRASAD be reconsidered and withdrawn.

Claims 21 and 23-26 depend from claim 20. Therefore, these claims are patentable over BRIGHT and PRASAD for at least the reasons set forth above with respect to claim 20. Accordingly, Applicants respectfully request that the rejection of claims 21 and 23-26 under 35 U.S.C. § 103(a) based on BRIGHT and PRASAD be reconsidered and withdrawn.

Moreover, these claims are patentable over BRIGHT and PRASAD for reasons of their own. For example, claim 24 recites features similar to, yet possible of different scope than, features recited in claim 5. Therefore, claim 24 is patentable over BRIGHT and PRASAD for at least the additional reasons set forth above with respect to claim 5.

Independent claim 34 recites features similar to, yet possible of different scope than, features recited in claim 13. Therefore, claim 34 is patentable over BRIGHT and PRASAD for at least reasons similar to the reasons set forth above with respect to claim 13. Accordingly, Applicants respectfully request that the rejection of claim 34 under 35 U.S.C. § 103(a) based on BRIGHT and PRASAD be reconsidered and withdrawn.

Claims 2, 3, and 22 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over BRIGHT in view of PRASAD, and further in view of ALBERT.

Applicants respectfully traverse this rejection.

Claims 2 and 3 depends from claim 1. Without acquiescing in the Examiner's rejection of claims 2 and 3, Applicants submit that ALBERT does not overcome the deficiencies of BRIGHT and PRASAD set forth above with respect to claim 1. Therefore, these claims are patentable over BRIGHT, PRASAD, and ALBERT for at least the reasons set forth above with respect to claim 1. Accordingly, Applicants respectfully request that the rejection of claims 2 and 3 under 35 U.S.C. § 103(a) based on BRIGHT, PRASAD and ALBERT be reconsidered and withdrawn.

Claim 22 depends from claim 20. Without acquiescing in the Examiner's rejection of claim 22, Applicants submit that ALBERT does not overcome the deficiencies of BRIGHT and PRASAD set forth above with respect to claim 20. Therefore, these claims are patentable over BRIGHT, PRASAD, and ALBERT for at least the reasons set forth above with respect to claim 20. Accordingly, Applicants respectfully request that the rejection of claim 22 under 35 U.S.C. § 103(a) based on BRIGHT, PRASAD and ALBERT be reconsidered and withdrawn.

Claims 27 and 29-33 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over PRASAD in view of DOSHI. Applicants respectfully traverse this rejection.

Amended independent claim 27 recites features similar to, yet possibly of different scope than, features recited above with respect to claim 1. Without acquiescing in the Examiner's rejection, Applicants submit that DOSHI does not overcome the

deficiencies of PRASAD set forth above with respect to claim 1. Therefore, claim 27 is patentable over PRASAD and DOSHI, whether taken alone or in any reasonable combination, for at least reasons similar to the reasons set forth above with respect to claim 1. Accordingly, Applicants respectfully request that the rejection of claim 27 under 35 U.S.C. § 103(a) based on PRASAD and DOSHI be reconsidered and withdrawn.

Claims 29-33 depend from claim 27. Therefore, these claims are patentable over PRASAD and DOSHI for at least the reasons set forth above with respect to claim 27. Accordingly, Applicants respectfully request that the rejection of claims 29-33 under 35 U.S.C. § 103(a) based on PRASAD and DOSHI be reconsidered and withdrawn.

Claim 28 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over PRASAD in view of DOSHI, and further in view of ALBERT. Applicants respectfully traverse this rejection.

Claim 28 depends from claim 27. Without acquiescing in the Examiner's rejection of claim 28, Applicants submit that ALBERT does not overcome the deficiencies of PRASAD and DOSHI set forth above with respect to claim 27. Therefore, this claim is patentable over PRASAD, DOSHI, and ALBERT for at least the reasons set forth above with respect to claim 27. Accordingly, Applicants respectfully request that the rejection of claim 28 under 35 U.S.C. § 103(a) based on PRASAD, DOSHI and ALBERT be reconsidered and withdrawn.

The Applicants respectfully request that this proposed amendment under 37 C.F.R. § 1.116 be entered, placing the application in condition for allowance. In addition, the Applicants respectfully submit that entry of this proposed amendment would place the application in better form for appeal in the event that the application is not

allowed. If the Examiner does not believe that all pending claims are in condition for allowance, the Examiner is urged to contact the undersigned attorney to expedite prosecution of this application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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